

Application No. 10/749,806
 Amendment dated April 7, 2007
 Reply to Office Action of December 7, 2006

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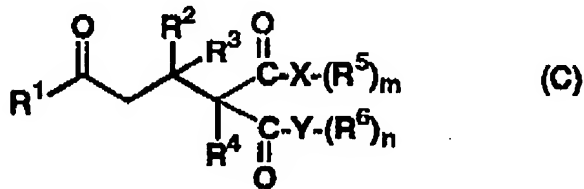
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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently amended) A process for producing an optically active compound represented by general formula (C)

[Chem. 3]



(in the formula, R^1 denotes ~~an aromatic monocyclic or aromatic polycyclic hydrocarbon group, which may have a substituent, a saturated or unsaturated aliphatic hydrocarbon group or alicyclic hydrocarbon group, which may have a substituent, a heteromonoicyclic or heteropolycyclic group, which may have a substituent, or a hydrogen atom, an alkoxy group, or an amino group;~~ R^2 and R^3 independently denote a hydrogen atom, or an aromatic monocyclic or aromatic polycyclic hydrocarbon group, which may have a substituent, a saturated or unsaturated aliphatic hydrocarbon group or alicyclic hydrocarbon group, which may have a substituent, ~~or a heteromonoicyclic or heteropolycyclic group, which may have a substituent,~~ and R^1 and R^2 , R^1 and R^3 , or R^2 and R^3 may be bonded to each other to form a ring; R^4 denotes a hydrogen atom, or an aromatic monocyclic or aromatic polycyclic hydrocarbon group, which may have a substituent, a saturated or unsaturated aliphatic hydrocarbon group or alicyclic hydrocarbon group, which may have a substituent, ~~or a heteromonoicyclic or heteropolycyclic group,~~

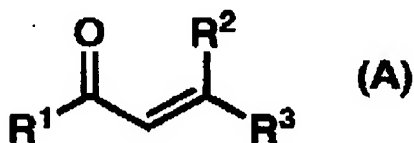
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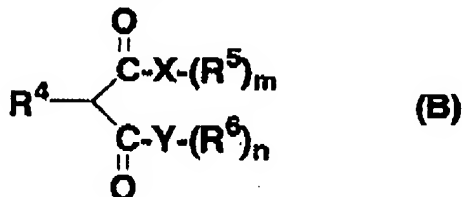
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~~which may have a substituent; R⁵ and R⁶ independently denote a hydrogen atom, an aromatic monocyclic or aromatic polycyclic hydrocarbon group, which may have a substituent, a saturated or unsaturated aliphatic hydrocarbon group or alicyclic hydrocarbon group, which may have a substituent, or a straight-chain or branched C1 to C20 alkoxy group, and R⁴ and R⁵, R⁴ and R⁶, or R⁵ and R⁶ may be bonded to each other to form a ring; X and Y independently denote a single bond, or an oxygen atom, ~~a sulfur atom, a nitrogen atom, or a phosphorus atom~~; and m and n are independently 1 or 2; ~~when X and/or Y is a single bond, an oxygen atom, or a sulfur atom, m and/or n is 1, and when X and/or Y is a nitrogen atom or a phosphorus atom, m and/or n is 2~~~~ by reacting a compound represented by general formula (A)

[Chem. 1]



(in the formula, R¹, R², and R³ have the same meaning as above),
 and a compound represented by general formula (B) [Chem. 2]



(in the formula, R⁴, R⁵, R⁶, X, Y, m, and n have the same meaning as above), with an asymmetric metal complex obtained from an optically active nitrogen-containing compound and a ruthenium compound as a complex of a metal of group VIII of the periodic

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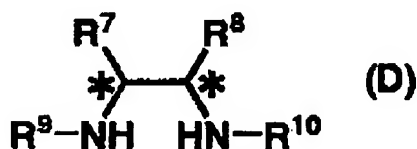
table; with the proviso that the substituent is not a heteromonocyclic or heteropolycyclic group.

2. (Previously presented) The process for producing an optically active compound according to Claim 1, wherein X and Y of compound (B) according to Claim 1 are both oxygen atoms.

3. (Previously presented) The process for producing an optically active compound according to Claim 1, wherein X of compound (B) according to Claim 1 is an oxygen atom and Y is a single bond, or X is a single bond and Y is an oxygen atom.

4. (Currently amended) The process for producing an optically active compound according to Claim 1, wherein the optically active nitrogen-containing compound has a structure represented by general formula (D)

[Chem. 4]



(in the formula, R⁷ and R⁸ independently denote an aromatic monocyclic or aromatic polycyclic hydrocarbon group, which may have a substituent, ~~a saturated or unsaturated aliphatic hydrocarbon group or alicyclic hydrocarbon group, which may have a substituent, or a heteromonocyclic or heteropolycyclic group, which may have a substituent,~~ and R⁷ and R⁸ may be bonded to each other to form a ring; R⁹ denotes a hydrogen atom or an alkyl group; R¹⁰ denotes ~~an acyl group, a carbamoyl group, a thioacyl group, a thiocarbamoyl group,~~ an alkylsulfonyl group, or an arylsulfonyl group; and * denotes an asymmetric carbon atom);

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with the proviso that the substituent is not a heteromonocyclic or heteropolycyclic group.

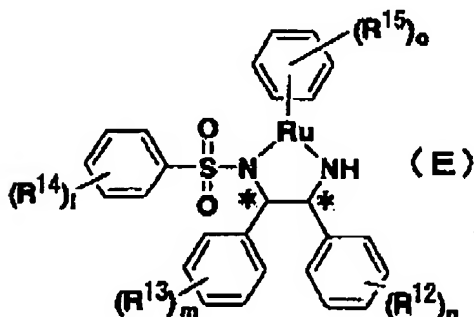
5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Currently amended) The process for producing an optically active compound according to Claim 1, wherein the asymmetric metal complex is an asymmetric ruthenium amido complex represented by general formula (E)

[Chem. 9]



†in the formula, R^{12} , R^{13} , and R^{14} , independently denote a hydrogen atom, an alkyl group, a halogen atom, or an alkoxy group, 1 independently denotes an integer of 1 to 5, and ~~1~~, m and n have the same meaning as above, R^{15} denotes a methyl group, an ethyl group, a propyl group, or an isopropyl group, o denotes an integer of 0 to 6, and * denotes an asymmetric carbon atom†.

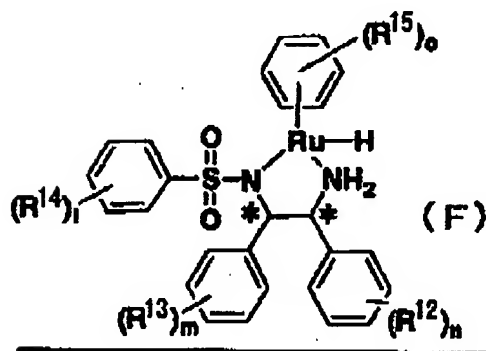
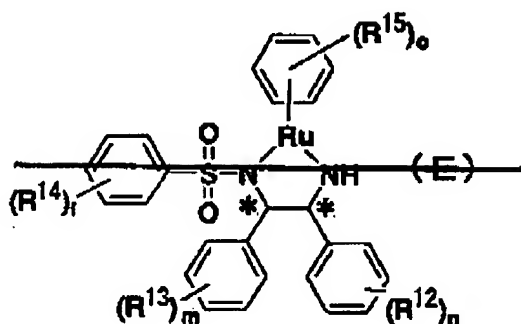
9. (Currently amended) The process for producing an optically active compound according to Claim 1, wherein the asymmetric metal complex is an asymmetric ruthenium hydrido complex represented by general formula (F)

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[Chem. 10]



(in the formula, R^{12} , R^{13} , R^{14} , R^{15} , l , m , n and o have the same meaning as above, and * denotes an asymmetric carbon atom).